

ABSTRACTS

FROM

REPORTS ON TOWNSHIPS WEST OF THE  
FOURTH MERIDIAN

RECEIVED, FROM SURVEYORS

BETWEEN JUNE 30, 1910, AND JULY 1, 1911

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Published by authority of the HONOURABLE ROBERT ROGERS,  
Minister of the Interior.



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**NOTICE.**

The following descriptions of townships recently surveyed have been prepared from the field notes and reports of the surveyors.

The townships in this pamphlet, are placed in ranges, the number of the range being at the top of the page and the number of the township in heavy figures on the left side.

**E. DEVILLE,**  
*Surveyor General.*



**LIST OF TOWNSHIPS, REPORTS OF WHICH ARE CONTAINED IN THIS  
PAMPHLET.**

**WEST OF THE FOURTH MERIDIAN.**

<i>Township.</i>	<i>Range.</i>
13, 14, 63, 65, 66, 68, 76, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95. . . . .	1
65, 66, 68, 76. . . . .	2
63, 64, 65, 66, 68, 76. . . . .	3
63, 64, 66, 68, 76. . . . .	4
63, 64, 65, 66, 68, 76. . . . .	5
63, 64, 68, 76. . . . .	6
2, 63, 64, 68, 76. . . . .	7
2, 63, 64, 68, 76. . . . .	8
63, 64, 68, 76. . . . .	9
63, 64, 65, 66, 68. . . . .	10
65, 66, 68. . . . .	11
65, 66, 68. . . . .	12
69. . . . .	13
69. . . . .	15
63, 68, 69. . . . .	16
61, 62, 63, 64, 68, 69. . . . .	17
61, 62, 63, 64, 65, 67, 68, 69. . . . .	18
2, 61, 62, 63, 68, 69. . . . .	19
2, 61, 62, 63, 68, 69. . . . .	20
61, 62, 63, 68, 69. . . . .	21
61, 62, 63, 68, 69. . . . .	22
68, 69. . . . .	23
64, 65, 66, 67, 68. . . . .	25
64, 65, 66, 67, 68. . . . .	26
1, 63, 64, 65, 66, 67, 68. . . . .	27
10. . . . .	30





## TOWNSHIPS WEST OF THE FOURTH MERIDIAN

### RANGE 1.

**13 & 14.** As all the country embraced in this survey is the dry bed of "Many Island lake," the soil is third and fourth class, being sand and sandy, clay, unfit for farming but good for pasture and feed. The surface is flat and surrounded by rolling and hilly prairie. In the northwestern part a few sections are composed of mud flats; in the central part several sections are covered with bulrushes and are practically worthless. In the southern part about half a section has been irrigated. Hay of fair quality grows on about one fifth of the land. There is no timber whatever nor any fuel supply. Water of a mediocre quality may be obtained from wells, but none from lakes and streams as the supply there is alkaline and fast evaporating. The climate is fine but too dry, although there are no summer frosts. The game consists of geese, ducks and swans.—*C. F. Miles, D.L.S., 1910.*

This township is best reached by the St. Paul-Cold lake wagon road which  
**63.** is good. The soil is good and suitable for general farming. The ground is covered with poplar and spruce. The spruce which is very fine is in sections 1, 2, 3, 9, 11 and 12 and is the best of timber. There are no hay lands. Cold lake which forms a large part of the township contains good water and good fish in large supply. There are no water-powers nor minerals. The climate is delightful and summer frosts are rare. Game consists of moose, muskrats, foxes, mink, bears, deer, partridges, ducks, geese and other game.—*M. W. Hopkins, D.L.S., 1909.*

The wagon road from Cold lake passes across the western part of this town-  
**65.** ship. The soil is fair. Big poplar and scattered spruce cover the surface. There is no hay. The township is situated on the north shore of Cold lake, and around Martineau river which passes through its eastern part it is very beautiful. The place is a fine one for moose shooting. All kinds of game, muskrats, foxes, deer, ducks, geese and bears are plentiful.—*M. W. Hopkins, D.L.S., 1910.*

Through the middle of this township runs a wagon road from Cold lake.  
**66.** The road is not very passable in summer. This township has not a very good soil and the surface of the north half is covered with dense bush of spruce, poplar and birch. In the south half the bush is of the same kind though not so dense. The trees are not large. The west half of the township has much swamp where spruce and tamarack grow. There is no hay land. No water-powers, stone-quarries nor minerals were seen. The climate is good. Moose, deer, partridges, muskrats and foxes are numerous.—*M. W. Hopkins, D.L.S., 1910.*

(North outline.) The surface of this township is rolling, consisting of  
**68.** ridges alternating with muskegs and occasional tamarack swamps in the depressions. The ridges are timbered with jackpine and some poplar up to ten inches in diameter, with a few birch. The soil on the ridges consists of sand and clay, with from three to six inches of black loam on the surface. In the depressions it is moss and black loam. Good water is plentiful, but grass is very scarce and there are no hay meadows. No water-powers occur and no coal, stone-quarries nor minerals of economic value were noted. Moose are said to be plentiful, but none

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 1.—*Continued.*

were seen during the survey. A few rabbits, partridges, prairie-chickens and muskrats were seen, and indications of wolves, foxes, bears and coyotes were noted.—*Wm. Christie, D.L.S., 1910.*

(*North outline.*) The surface of this township is rolling, consisting of  
**76.** sandy ridges covered with small jackpine, alternating with large spruce and tamarack swamps. Buffalo river crosses the northwest corner of the township flowing northeast, and crossing the base line at the northwest corner of section 33. This stream is about sixty feet wide, and has an average depth of about two feet, and a fairly rapid current. The banks are about thirty feet high in places and the valley is narrow. A few small grassy flats are to be found along the banks of the river. A small amount of water-power might be developed by damming this stream. In the portion of the township to the west of Buffalo river there is some poplar, as well as jackpine on the ridges. The height of land crosses the base line near the northwest corner of this township. No coal, stone-quarries nor minerals of economic value were noted. Moose, elk, jumping deer, bears, wolves, foxes, lynx, muskrats and partridges are plentiful. There are also a few prairie-chickens and rabbits.—*Wm. Christie, D.L.S., 1910.*

(*East outline.*) This township is generally thickly timbered and the central part is hilly. The easterly part runs through much swamp area, especially along the northeast quarter, but there is some good land in the southerly quarter. Graham creek flows westerly across the south of the township, joining Landels river about section 4. This river is about thirty-five feet wide and flows northwesterly to Pembina river. Landels river would probably be navigable for small canoes for a few miles above the junction of Graham creek, although there are intervals of shallow water. An Indian trail from Lac la Biche to Methye portage crosses the westerly part of the township.—*J. N. Wallace, D.L.S., 1910.*

(*East outline.*) The surface is rolling, the southeasterly quarter being low  
**81.** and wet, though there are no bad swamps. The northerly part is higher, with a good deal of large poplar on the higher lands, the soil on which, however, is somewhat hard and stony. The timber over the southerly part is generally small, and consists chiefly of spruce. An Indian trail running from Lac la Biche to Methye portage crosses the westerly part of the township. There are several small streams in the township, all of which flow northwest and ultimately join Newby creek, a tributary of Landels river.—*J. N. Wallace, D.L.S., 1910.*

(*East outline.*) The surface is rolling and the township is all timbered,  
**82.** generally with five-inch pine, with a small quantity of spruce. There is an area of spruce of commercial value in the west of the township. Several streams are found flowing west, the largest of which is Newby creek, which crosses the southerly part of the township in a local valley, fifty feet deep, with ridges of pine on either side. There is hardly any grass along Newby creek, but some grows along the other streams, and the surface is nearly all moss covered. An Indian pack-trail runs northerly across the middle of the township, going from Lac la Biche to Methye portage.—*J. N. Wallace, D.L.S., 1910.*

(*East outline.*) The lands are generally undulating, with local higher  
**83.** places, but it is all thickly timbered, small spruce occupying the depressions with six to ten-inch poplar, on the higher lands. Pine is not so common as in the neighbouring townships to the south. The soil is generally

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 1.—*Continued.*

fairly good, although by far the greater part of the surface is moss covered. The extreme north end of the township has a large area of swamp. In the northwest there is some good land covered with small poplar. Kimowin creek, which is about six feet wide, flows east across the township. There is a narrow belt of good grass growing among willow along this stream. It flows northeasterly to Garson river. The northeast corner of the township falls in Formby lake, and the land around this lake is very wet and boggy, especially on its east side. There are several lakes of small size in the township. The Indian pack-trail from Lac la Biche to Garson lake and Methye portage runs along the east part of the township.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—About two-thirds of this township falls in Garson lake, **84.** only the southerly two miles being on dry land. Of this latter the part near Garson lake is high, is covered with large thick poplar and contains good soil. The south part of the township is very wet and contains much bog land lying north of Formby lake. Garson lake is about ten miles long, running in a southwest and northeast direction, and about six miles wide, containing about forty square miles. The lake is shallow and the water very liable to become muddy from the frequent winds which stir up the sand at the bottom of the lake. The extreme southwest corner of the lake has a swampy border, but the remainder of the south shore is dry poplar-covered land.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—The southeast quarter of this township falls in Garson **85.** lake, while the northeasterly part is very swampy and timbered with tamarack and small spruce with burnt pine on the higher lands. The surface is all moss covered. Raft lake, which is about three miles long, lies in the northeast corner. It has much bog land around its edge. A small stream drains this lake southerly, but the stream is lost in the swamps around Garson lake.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—The east outline crosses much swamp land in the southerly **86.** three miles, but farther west the land is much drier, being timbered with small spruce. Raft lake crosses the extreme southeast corner in a very swampy region. The northeast of the township is high and timbered with pine on sandy ridges, although a few areas of poplar also occur on the higher parts.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—There is a good deal of poplar-covered country in this town- **87.** ship. The southeast quarter is swampy with spruce and tamarack and the township is all timbered, although the trees are small. There is some good land in the north of the township which extends westerly out towards Gipsy lake, which is a large lake about three miles to the west of the west boundary of this township. Edwin creek, a stream twenty feet wide, crosses the northerly part of the township. It has several small creeks flowing into it, and probably joins Gipsy river a few miles north of Gipsy lake.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—The northerly half of the township is generally dry land **88.** timbered with small poplar, spruce and pine, with areas of good soil. The southerly part is timbered with larger pine and poplar. The westerly end of a very extensive tamarack swamp is crossed by the east boundary in sections 1, 12 and 13. This swamp extends easterly for many miles, and apparently drains both to the east and west. A small stream flows east from it to the north end of Methye lake.

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 1.—*Continued.*

and another flows west through the township. There is good grass for horses along the stream. The edge of the high land on the southerly side of McMurray valley follows along the north boundary of the township. A good Indian pack-trail runs north-easterly across the township.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—Nearly all of this township is occupied by McMurray valley or its tributary coulees. The valley is 600 feet deep on the south side and 800 feet on the north side and is very rough and broken. It is all heavily timbered up to the very edge of the water. There is good soil in places, but very little level land occurs in the valley and there are no open spaces. The timber consists of mixed spruce and poplar which attain thirty inches in diameter, and birch running to 12 inches. There is a good deal of timber of commercial value, that on the south side of the valley being generally larger than that on the north side. McMurray river, the water of which is very good, averages about one hundred and twenty yards in width and varies irregularly from three to ten feet deep along its course, while the current averages about two miles per hour. The bed of the river is usually a fine hard sand. There is a valuable water-power at Whitemud falls, where the total fall is about forty or fifty feet in a distance of a quarter of a mile, the river being here confined in a narrow channel between high rocky walls.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—The southerly part consists of sandy ridges with partly-burnt six-inch pine alternating with small burnt pine in the depressions. There is a large area of very swampy land in the easterly part of the township extending across sections 13 and 24. The northerly part, north of Sutton creek, is very sandy with a growth of six-inch green pine. Sutton creek is a deep stream about fifteen feet wide flowing west with a rapid current and good water. It crosses the east boundary of the township in the middle of section 25. There is no poplar in the township, and the surface is almost all moss covered.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—On this hilly township the timber is all pine, spruce or tamarack and the surface is nearly all moss covered. The higher lands are very sandy and timbered with partly-scorched six-inch pine, the surface being almost bare of vegetation, while wet lands are rare and small in area. The only soil of any future value is that in the depressions where small spruce grows. The sandy nature of the soil becomes more pronounced in the north part of the township. Gordon creek, a stream eight feet wide, flows southwesterly across the township and ultimately joins Sutton creek. The general elevation of the township is very high, being about nineteen hundred feet above sea-level.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—This township is very hilly and the soil is very sandy. The timber on the southerly part is mostly burnt, standing pine, and the surface is almost bare of vegetation, while there are hardly any wet areas. In many places the timber is so light that a wagon road can be made with very little cutting. In the northerly half of the township there is a general dense growth of pine about ten feet high with irregular patches of larger green pine and small fallen sticks. There is practically no soil of any value in the township. Numerous small lakes with dry, sandy shores occur in the hollows of the hills and many of these lakes have no stream flowing into or out of them. A remarkable valley crosses the northerly part of the township running a little to the south of west; it is three-quarters of a mile wide in the bottom and about one hundred and fifty feet deep. It is flat and swampy with small spruce and tamarack, and a small stream flows westerly through it. All the

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 1.—*Continued.*

rest of the township is composed of sandy hills and ridges. The general elevation of the township is very high, being some nine hundred feet above McMurray river, or about two thousand feet above sea-level.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—This township is very hilly nearly all of it being composed of low rolling hills a hundred feet above the small valleys. The soil is generally almost pure, fine sand. The only timber met with on the higher lands is jackpine, varying from a dense growth a few feet high to ten feet high, with a few irregular scorched patches of six-inch pine. Wet areas are almost unknown. Over a large part of the township the growth of timber is so light that very little cutting is required to make a wagon road. There is no agricultural land in the township, and to judge by present conditions the only thing which will grow is jackpine. The hills are more marked in the westerly part of the township, and a high ridge is crossed by the east boundary at the northeast corner. There are numerous small lakes with dry sandy shores, the water of which is good, although they have seldom any stream flowing into or out of them. The surface of the township is generally bare of any kind of vegetation.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—This township is very hilly, nearly all of it being composed of low rolling hills a hundred feet or so above the small valleys. The only timber met with is jackpine. Over large areas this is only a few feet high and very scattered, giving the appearance of a partially open country. There is no agricultural land in the township, the soil being almost pure, fine sand, and wet areas are almost unknown. Towards the north of the township the timber becomes more dense, and much larger patches of pine running to ten inches in diameter are common. There are a few small lakes in the hollows, with dry, sandy shores and good water, but as a rule water is very scarce in the township. The surface is quite barren of vegetation. The general elevation of the township is very high, being about nineteen hundred feet above sea-level.—*J. N. Wallace, D.L.S., 1910.*

(*East outline*).—The surface of this township is broken and very hilly. There is a general growth of pine everywhere, either existing as a very dense growth a few feet high, or else as six-inch pine growing not very close together. There is no other timber to speak of. Wet lands are very rare, but there are numerous small lakes with dry sandy shores and good water, often without any outlet or inlet. A very rough ridge running about east and west crosses sections 12 and 13, and extends for several miles on each side of the east boundary of the township; it is about two hundred feet high and very steep and broken with knolls. The only stream crossing the township runs southwesterly from section 36. It has a very small quantity of grass along its banks. The surface is bare of vegetation, and there is no agricultural land in the township. The general elevation is very high, varying from nineteen hundred to twenty-one hundred feet above sea-level.—*J. N. Wallace, D.L.S., 1910.*

## RANGE 2.

This township is easily reached by the Cold lake road which is fairly good for travelling. The soil is of fair quality and the surface is covered with poplar of medium size and small scattered spruce and birch. Hay lands are not available. Good water can be found in lake Marie situated in the western part of the township, in Cold lake in the southeastern part and in Goose river which flows through the middle of the township and empties into Cold lake. Stone-quarries, water-powers, coal or minerals of economic value were not noted. The climate of this

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## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 2.—*Continued.*

district is delightful and suited to the growth of grain and small fruits. The latter product is larger and better in the wild state here than in the cultivated form in most localities. Moose, bears, deer, hares, foxes, partridges, ducks and geese are plentiful.—*M. W. Hopkins, D.L.S., 1910.*

**66.** The best route to this township is from Cold lake. There is much spruce and tamarack swamp throughout, the northern half especially being of this nature, and very difficult to pass through. Small spruce and tamarack, jack-pine, poplar and birch cover the surface but the soil is of poor quality. No hay-lands, water-powers, stone-quarries nor valuable minerals were seen. The water throughout the township is fresh and good, and found principally in Goose river which flows across the southeast portion. The climate is fine, and game consisting of deer, bears, and partridges is plentiful.—*M. W. Hopkins, D.L.S., 1910.*

**68.** (*North outline*).—The surface is rolling consisting of ridges alternating with muskegs and tamarack swamps. The ridges are covered chiefly with jack-pine up to eight inches in diameter, with a small amount of poplar and spruce. The soil on the ridges is sand and clay, with from two to eight inches of black loam on the surface. In the depressions it is moss, swamp mould and black loam. This township would require considerable artificial drainage to render it fit for agriculture. A small lake is crossed by the north outline on the north boundary of section 33. A creek, about forty feet wide and one and one-half feet deep, flows into this lake from the southwest. The outlet of this lake is to the north, but it crosses the line again in section 36, and flows south across the township. The water in this creek is fresh and the supply is permanent. No large game was seen during the survey, but indications of moose, elk, bears, foxes and coyotes were plentiful. Several fresh beaver dams were noted along the creek mentioned above. A few rabbits, partridges, prairie-chickens and ducks were also seen. No coal, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

**76.** (*North outline*).—The surface of this township is rolling, consisting of ridges alternating with tamarack swamps and muskegs. The ridges are covered with a dense growth of small spruce and jackpine with some old *brulé* and a few bluffs of poplar. The height of land crosses this township. The soil on the dry land is black loam to a depth of from three to six inches on a subsoil of clay and sand. No coal, stone-quarries nor minerals of economic value were noted. Moose, elk, caribou, bears, wolves, coyotes, foxes and muskrats are plentiful. A few partridges and rabbits are also found.—*Wm. Christie, D.L.S., 1910.*

## RANGE 3.

The best route to this township is the St. Paul-Cold lake road which is good.  
**63.** Sections 1, 2, 3, 4, 5, 8, 9, 10, 11 and 12 are covered with jackpine, and the soil is light and sandy and not good for farming. The remainder of the township is covered with poplar and willow and is suitable for farming. Much of the land is low. There are no hay marshes. Water is good and permanent. No minerals have been discovered. Game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

This township is best reached by the St. Paul-Cold lake road which is good.  
**64.** The soil is good and sections 1 to 12 are fine farming land. The remainder is high land covered with poplar and spruce and is hilly. There is much poplar over the whole township. There is no hay land but there is plenty of good

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 3.—*Continued.*

fresh water. No water-powers nor minerals were found. The climate is charming and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

**65.** This township can be reached from Cold lake, but owing to numerous and extensive swamps of spruce and tamarack and jackpine ridges it is difficult to travel through in summer. Except in scattered places the soil is not of good quality. The surface is covered with poplar of medium size, and spruce and tamarack too small to be valuable as timber. Hay lands, water-powers, stone or minerals of economic value were not observed in the township. The climate is fine, and game consisting of moose, deer, bears, partridges, ducks and geese, is plentiful.—*M. W. Hopkins, D.L.S., 1910.*

**66.** The best route to this township is from Cold lake, but the road is not easily travelled in summer. The soil is not of good quality and the surface is covered with spruce and tamarack swamps alternating with ridges of jackpine, poplar and birch. The spruce and tamarack are too small to be of commercial value. There are no hay lands, water-powers, stone-quarries nor minerals. May lake, a very pretty body of fresh water, occupies the centre of the township. The climate is delightful, and game consisting of moose, deer, partridges and bears, is plentiful.—*M. W. Hopkins, D.L.S., 1910.*

**68.** (*North outline.*)—The surface of this township is rolling, and the ridges are covered with jackpine, poplar and spruce, while the depressions are occupied by muskegs, and spruce and tamarack swamps. The west half of the township has been recently overrun by fire, which killed the greater part of the timber. The soil on the ridges consists of from two to four inches of black loam on a subsoil of sand and clay. No hay meadows occur in the township. Moose, deer, foxes, coyotes and muskrats are plentiful, while a few partridges and rabbits were also seen. No water-powers, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

**76.** (*North outline.*)—The surface of this township is rolling. Most of it has been overrun by fires which destroyed the original timber, and a growth of small poplar, jackpine and spruce has since grown up. There are a few scattered bluffs of larger timber that have escaped the fires. There are also many large areas of muskeg and tamarack swamp. The soil on the dry land is sand and clay with about three inches of black loam on the surface. Winefred river flows across the north-west corner of the township, entering it in section 31 and leaving in section 32. This stream is about seventy-five feet wide, and has an average depth of about two feet and a fairly rapid current. The banks are low and in places marshy. Moose, elk, caribou, bears, mink and muskrats are plentiful. A few partridges, chickens, ducks and rabbits were also seen. No coal, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

## RANGE 4.

**63.** This township is best reached by St. Paul-Cold lake road which is good. The soil is very fair and the township is suitable for general farming. Muskrat lake is a low grassy lake but there is plenty of good, fresh and permanent water. The land is covered with small poplar. There are no water-powers nor minerals. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE, 4.—*Continued.*

The south third is good farming land but the remainder is hilly and covered with thick poplar interspersed with spruce. Sections 1 to 12 are covered with small poplar and are level. There are no hay sloughs nor water-powers and no minerals have been discovered. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

**66.** This township is best reached from Cold Lake, though it is very hard to gain access in the summer owing to the numerous large swamps. The soil is not good and the surface is covered with small spruce, tamarack, poplar, jackpine and birch. There is no hay land. No water-powers, stone-quarries, nor minerals were observed. Moose, deer, bears and partridges are numerous. The climate is delightful. Bourque lake, which is about four miles long, extends into the south of the township.—*M. W. Hopkins, D.L.S., 1910.*

(*North outline*).—The surface of this township is rolling, consisting of ridges alternating with large muskegs and tamarack swamps. The ridges are timbered with jackpine and poplar up to eight inches in diameter, together with a few small birch and a few spruce, some of the latter attaining a diameter of twenty inches. A mud lake lies in section 36, and a lake about one mile long by half a mile wide is crossed by the line in section 32. Another lake about the same size lies in sections 30 and 31, while a fourth lies in the southeast corner of the township. Grass is very scarce except around the shores of the lakes mentioned. Moose are plentiful and a few indications of elk and bears were noted. Foxes and coyotes also are found, and muskrats are very numerous. A few partridges and rabbits were also seen. No water-powers, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

(*North outline*).—The greater part of the south half of this township is occupied by Winefred lake which extends practically the whole width of the township. Winefred river flows northeast from this lake leaving the township in section 36. This stream is about seventy-five feet wide and has an average depth of about two feet, and a fairly rapid current. The banks are low and in places swampy. Along the north shore of the lake is a range of hills extending about two-thirds of the way across the township. These are timbered with poplar and spruce. The portion of the township lying north of these hills consists of ridges covered with small jackpine, spruce, and poplar, with considerable brûlé, alternating with muskegs and tamarack swamps. Winefred lake is said to teem with whitefish. A number of Indians live along the south shore of this lake, and grow a few potatoes and other vegetables, which they claim do well. Moose, elk, caribou, bears, wolves, coyotes, mink and muskrats are plentiful. A few partridges, chickens, ducks, rabbits and foxes are also found.—*Wm. Christie, D.L.S., 1910.*

## RANGE 5.

This township is best reached by the St. Paul-Cold lake road. The soil is good and is covered with poplar and willow. There are many small creeks and the water supply is fresh and permanent. The land is not liable to be flooded. There are no water-powers. No minerals have been discovered. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

**64.** This township is best reached by the St. Paul-Cold lake road. The soil is good and is covered with poplar, interspersed with a few spruce; it is suitable for general farming. No hay land, water-powers nor minerals were seen. The land is not subject to flooding. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*



## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 5.—*Continued.*

The best route to reach this township is from Cold lake, though access in summer-time is not easy owing to the large spruce and tamarack swamps.

**65.** The soil is poor. Small spruce and tamarack, jackpine, poplar and birch cover the surface and there is no hay land. Marguerite lake extends into the west side of the township. It contains very good water. There are no waterfalls, and no stone-quarries nor minerals were discovered. The climate is delightful. Game of all Canadian varieties such as moose, deer, bears, partridges, ducks and geese are plentiful.—*M. W. Hopkins, D.L.S., 1910.*

This township is difficult of access but is most easily reached from Cold lake.

**66.** The soil is of fair quality and the surface is covered with small spruce, tamarack, poplar, jackpine and birch. No hay lands nor water-powers occur. Stone or minerals of economic value were not noticed in the township. The climate is good and game consisting of moose, deer, bears and partridges is plentiful.—*M. W. Hopkins, D.L.S., 1910.*

(*North outline*).—The surface of this township is rolling, consisting of sandy ridges covered with jackpine, spruce and poplar up to eight inches in diameter, alternating with large muskegs and tamarack swamps. The soil on the dry land is chiefly black loam to a depth of from four to eight inches on a subsoil of sand; in the depressions it is swamp mould and black loam. A small lake is crossed by the line in section 33 and another lies about a mile south. These two lakes are connected by a small creek flowing north, on which a number of fresh beaver dams were noted. A number of small creeks cross the base line in section 36. The only grass found in the township was a narrow strip around the shores of the lakes mentioned above. Moose, elk, bears, foxes, coyotes and muskrats are quite plentiful. A few partridges and rabbits were also seen. No water-powers, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

(*North outline*).—The surface of this township is rolling, consisting of ridges alternating with muskegs and tamarack swamps. The ridges are covered chiefly with brulé and a thick growth of young jackpine and poplar. The northwest quarter of section 31 is heavily timbered with poplar and spruce. Winefred lake extends into the southeast corner of this township. A creek twenty feet wide and two feet deep enters the township in section 3 and flows across sections 34, 33, 32 and 31 into the east end of a large lake, which extends from section 31 of this township to section 32, township 76, range 7. Along the banks of this creek is a narrow strip of excellent grass. The soil is mostly sand with two or three inches of black loam on the surface, but in sections 31 and 32, it is clay instead of sand. No coal, stone-quarries nor minerals of economic value were noted. Moose, elk, caribou, bears, wolves, coyotes, foxes, and muskrats are plentiful. A few partridges, rabbits and ducks were also seen.—*Wm. Christie, D.L.S., 1910.*

## RANGE 6.

This township is best reached by the St. Paul-Cold lake road. Sections 19, 20 and 21 are hay swamp and meadow. The remainder is good farming land. The whole township is covered with poplar and willow. There are no water-powers nor minerals. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 6.—*Continued.*

This township is best reached by the St. Paul-Mosquito lake road which is  
**64.** fair. The soil is fair, easy rolling and covered with thick poplar and a few spruce. Good fresh water is plentiful and permanent. No water-powers nor minerals were discovered and the land is not liable to be flooded. Summer frosts are rare. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

(*North outline*).—The surface of this township is rolling, and the soil on the  
**68.** ridges consists of black loam to a depth of from three to six inches on a sub-soil of sand and clay. The depressions are occupied by muskegs and tamarack swamps. The eastern half of the township has recently been overrun by fire, many places being burned almost clean. The western half of the township is timbered with poplar, spruce and jackpine up to fourteen inches in diameter, the poplar largely predominating. A small creek flows northwest across the base line in section 31, the valley of which is narrow and about one hundred feet deep. There is good grass along the banks of this creek. No big game was seen in this township during the survey, but indications of moose and bears were plentiful. A few partridges, rabbits and muskrats were seen. No water-powers, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

(*North outline*).—This township is divided into two parts by a large lake,  
**76.** which extends across the township from section 36, on the east, to section 30 on the west. This lake varies in width from half a mile to two miles. Two bays on the north shore of the lake extend north across the base line in sections 33 and 34. To the south of the lake is a range of hills covered with jackpine, poplar and spruce. The portion of the township lying north of the lake is mostly swamp, with a few ridges covered with brulé and small jackpine and poplar. This lake abounds in whitefish and jackfish. Moose, caribou, bears, wolves, coyotes, mink and muskrats are plentiful. A few rabbits, partridges and ducks were also seen. No coal, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

## RANGE 7.

The soil consists of a few inches of black loam, with a heavy clay subsoil, and  
**2.** is best suited for stock-raising, although during seasons of normal rainfall good crops have been raised in the vicinity. The surface of the country is a rolling and undulating prairie, broken in all directions by coulees from fifty to six hundred feet deep connecting with the valley of Milk river, about six hundred feet below the level of the surrounding country, flowing from west to east. The valley of this river is about one mile wide and contains a fair supply of poplar timber, extending from the centre to the eastern boundary. Very little hay is to be found. All the water is tainted with alkali, even Milk river to some extent. No falls nor rapids are found, but water-power could be developed by dams. The climate is unusually dry, the township being in the arid belt and summer frosts do not occur. Coal veins are found on the southwest quarter of section 15, the northeast quarter of section 22 and the southeast quarter of section 27, averaging six to eight feet thick. No stone-quarries are known and no game except antelope and grouse.—*W. F. O'Hara, D.L.S., 1910.*

The soil is good and covered with poplar and a few spruce. There are many  
**63.** small lakes on the shores of which there are some very good farms. The land is not liable to be flooded. There are no water-powers nor minerals and summer frosts are rare. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 7.—*Continued.*

**64.** The soil is good and suitable for general farming. It is rolling, and covered with poplar and willow. There is no hay nor water-power but the water supply is good and permanent. The land is not subject to floods and summer frosts are rare. No minerals were found exposed. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

**68.** (*North outline*).—The soil on the ridges of this rolling township is black loam to a depth of from three to six inches on a subsoil of sand, except in the northwest corner of the township, where the subsoil is clay. The depressions are occupied by muskegs and tamarack swamps. The dry land is timbered with poplar, spruce and jackpine up to eight inches in diameter, with considerable old *brulé* in places. In the southern part of the township poplar timber predominates, and is somewhat larger than in the north. There is also much less swamp land in the southern part. A number of small lakes occur in the north of the township, one of which the north boundary crosses in section 33. No hay lands, water-powers, stone-quarries nor minerals of economic value were noted. Moose, elk, jumping deer and bears are plentiful and indications of foxes, coyotes and wolves were noted. A few partridges, prairie-chickens and rabbits were also seen and muskrats are plentiful.—*Wm. Christie, D.L.S., 1910.*

**76.** (*North outline*).—A large lake extends across this township from section 25 to section 32. The outlet of this lake is about the east boundary of section 32, where a stream sixty feet wide flows north into another small lake, which is crossed by the base line in sections 32 and 33. From here the stream flows in a northwesterly direction to Pembina river about six miles distant. A creek about twenty feet wide enters the township in section 35 and empties into the large lake, in section 33. Along the banks of this creek is a strip of willow and good grass. Another creek about twenty feet wide flows into the lake from the west. The portion of the township lying to the north of the lake is gently rolling, the depressions being occupied by muskegs and tamarack swamps, while the high land is covered chiefly with *brulé*. There are, however, some bluffs of green poplar and spruce that have escaped the fire. The land to the south of the lake is rolling, the high land being covered with poplar, spruce and jackpine, while the depressions are occupied by muskegs and tamarack swamps. The soil on the high land is black loam from two to four inches deep on a subsoil of sand and clay; in the depressions it is moss, peat and black loam over clay. A pack-trail leading from Lac la Biche to McMurray crosses the northwest corner of this township, entering it from the west in section 31 and leaving in section 32. This trail is not much travelled. There is a number of old houses at the west end of the lake, in sections 32 and 33, all but one of which are empty. One Indian with his family still lives on section 33. No water-powers, coal, stone-quarries nor minerals of economic value were noted. Moose, caribou, bears, wolves, mink and muskrats are plentiful. A few ducks, partridges and rabbits were seen. Whitefish and jackfish are plentiful in the large lake.—*Wm. Christie, D.L.S., 1910.*

## RANGE 8.

**2.** The soil is a black loam five or six inches deep with a clay subsoil and is suitable for mixed farming. The surface consists of undulating prairie with no timber. Hay is produced in small quantities on lowlands, and in sloughs, but the land which produces hay without cultivation is limited. Good water can be obtained by sinking wells, the land not being alkaline, and from Milk river, 150 feet

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 8.—*Continued.*

wide and two feet deep, at low water, flowing through the centre. This stream could be used for irrigation, and water-power could be developed by the construction of dams. Frost occurs in the month of August but the season is of sufficient length for the maturing of crops. There are no stone-quarries nor minerals, and no fuel of any kind. The game consists of antelope, rabbits and grouse.—*W. F. O'Hara, D.L.S., 1910.*

**63.** For half a mile on each side of Beaver and Sandy rivers the soil is light and sandy and covered with jackpine. The remainder is good farming land, rolling and covered with poplar. The water supply is plentiful and good and the land not liable to be flooded. No water-powers nor minerals were discovered. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

**64.** The soil for half a mile on each side of Sandy river is light and sandy and covered with jackpine, while the remainder is good rolling soil covered with poplar. The water supply is good and permanent and the land is not liable to be flooded. There are no water-powers, minerals nor hay lands and summer frosts are rare. The climate is delightful and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

*(North outline)*—The surface of this township is somewhat broken. Punk **68.** river flows in a northerly direction across the township, entering it in section 35. This stream is about one hundred and twenty feet wide, and, at the time of the survey (July) had an average depth of about three feet. It is apparent, however, that during a freshet the water is at times four feet higher than when we crossed it. The valley of this stream is from seventy-five to one hundred and thirty feet in depth, and varies in width from one-half to three-quarters of a mile. The soil in this valley is good, consisting of about seven inches of black loam on a subsoil of clay. There is good grass along the river-banks. In the bottom-lands along the river and on the slopes are some clumps of good spruce and poplar. Two small creeks flowing into Punk river from the west have also deep valleys, with good grass in the bottom-lands along their banks. The rest of the township consists chiefly of sandy ridges covered with small second-growth jackpine and poplar, with *brulé*, the original timber having been destroyed by fire several years ago. Muskegs are numerous. A limited amount of water-power might be developed by damming Punk river. No coal, stone-quarries nor minerals of economic value were noted. Moose, elk, jumping deer, foxes, bears, coyotes and wolves are plentiful. A few partridges and rabbits were also seen.—*Wm. Christie, D.L.S., 1910.*

*(North outline)*—The surface of this township is hilly, the greater part of **76.** it being timbered with poplar, spruce and jackpine, most of which has been recently killed by fire. In some places, where earlier fires had killed the trees, recent fires have left the land almost clear of timber. There are also many local areas of muskeg and tamarack swamp. A creek about twenty feet wide and one and one-half feet deep flows north across the western part of the township for about four miles, where it turns to the east and crosses sections 28, 27, 26 and 25, leaving the township near the northeast corner of section 25. The valley of this creek is from two hundred to two hundred and fifty feet deep and is quite narrow with sloping sides. There is some good grass along the banks of this creek. The hills to the north of this creek, in sections 32, 33, 34, 35 and 36, overlook a wide depression to the north, through which flows Pembina river about six miles distant. No water-powers, stone-quarries, coal nor minerals of economic value were noted. Moose, caribou, and bears are said to be plentiful, but none were seen during the survey. A few partridges, rabbits and muskrats were seen.—*Wm. Christie, D.L.S., 1910.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

## RANGE 9.

The best route to this township is by St. Paul-Cold lake road where it branches off to Mosquito lake; this road passes north through range 8 not far from range 9. The soil is sandy and rolling and covered with poplar, jackpine, spruce and willow. No waterfalls nor minerals were discovered. The land is not liable to be flooded and the water supply is good and permanent. The climate is delightful and game plentiful.—*M. W. Hopkins, D.L.S., 1909.*

**64.** Sections 15, 16 and 17 are covered by a big muskeg while the northern part of the township is very heavy poplar. The soil is only fair and rolling and not very good for farming. There is no hay and there are no water-powers nor minerals. The water supply is good and permanent and the land is not subject to flooding. The climate is delightful and game plentiful.—*M. W. Hopkins, D.L.S., 1909.*

(*North outline*).—The surface of this township is high, rolling ground, and the greater part of it is heavily timbered with poplar and spruce, with a few birch and jackpine. Some of the poplar runs to sixteen inches, while some of the spruce runs to twenty-four inches in diameter. In the northeast corner of the township is a block of land, comprising part of section 34, and sections 35, 36, 25 and 24, which block is covered with brulé, scrub poplar and jackpine. A small creek flows southeast across the northeast corner of the township, entering it in section 34 and leaving in section 36. Along this creek are some good hay meadows. In the southwestern part of the township there are also some small hay meadows, in a valley which extends north from Touchwood lake in townships 87, ranges 9 and 10. The soil is good, consisting of black loam to a depth of from three to ten inches on a subsoil of clay, a little sand occurring in places. This will make good farming land when the timber is removed. Moose, bears and wolves are plentiful and a few partridges and rabbits were also seen. No water-powers, stone-quarries, coal, nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

(*North outline*).—The surface of this township is rolling, consisting of large muskegs and tamarack swamps, separated by ridges, timbered with poplar, jackpine and spruce, practically all of which has been recently killed by fire. The soil on the dry ground is chiefly black loam to a depth of from three to ten inches on a subsoil of clay and sand. A number of small creeks flow north across the base line, the largest one being in section 35. No hay meadows were found and the only grass seen was around the shore of a small lake in section 29. No water-powers, coal, stone-quarries nor minerals of economic value were noted.—*Wm. Christie, D.L.S., 1910.*

## RANGE 10.

The best way to reach this township is by the St. Paul and Lac la Biche road.  
**63.** The soil is good, and the surface is broken and covered with poplar. There is no hay land nor minerals. No water-powers exist and the land is not liable to be flooded. The water supply is good and permanent. The climate is delightful, and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

The best route to this township is by the St. Paul and Lac la Biche road which is good. The soil is fair and covered with heavy poplar interspersed with spruce and willow. The land is broken around this beautiful large lake which contains good water and good fish. There are no waterfalls and the land is not subject to flooding. There were no minerals exposed. The climate is delightful, and game is plentiful.—*M. W. Hopkins, D.L.S., 1909.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

## RANGE 10.

The soil is a good black loam, rather shallow in spots, on a clay or sandy clay subsoil, and will be, when the bush is cleared, quite suitable for mixed farming, the climate also being favourable. The surface is timbered with poplar, balm of Gilead, spruce and birch, and in sections 35 and 36 with a little balsam, poplar and balm of Gilead from four to eighteen inches in diameter predominating. Hay meadows are not found but water is exceedingly plentiful in Pinehurst lake which covers about eleven sections in the northeast, in Ironwood lake in the southwest, and in a number of small creeks. There are no water-powers and on account of the rolling nature of the country floods are unlikely. Stone-quarries and minerals are not found but wood fuel is everywhere sufficient. Moose, bears, partridges and ducks are plentiful.—*W. H. Waddell, D.L.S., 1910.*

The soil is a rich black loam from two to ten inches in depth, with a clay or sandy clay subsoil, and the heavy growth of pea-vine and other vegetation indicates a soil that will be well suited to farming when the bush is cleared. Poplar and balm of Gilead from four to fifteen inches furnish the principal timber, but scattered birch from four to eight inches and spruce from six to fifteen inches occur nearly everywhere, while the swamps and muskegs contain black spruce and tamarack from three to twelve inches in diameter. Water is fresh and permanent and there is no danger of flooding. No stone-quarries nor minerals are known, but wood fuel is to be had everywhere in abundance. Game consisting of moose, bears, partridges and ducks, and fish consisting of whitefish and jackfish are found.—*W. H. Waddell, D.L.S., 1910.*

(*North outline*).—The surface of this township is hilly, the greater part of it being heavily timbered with poplar, spruce, birch and jackpine. The height of land crosses the north boundary of this township in section 35, following a range of hills almost due south across the township. A small creek flows south crossing in the eastern tier of sections. This creek empties into Touchwood lake, which lies in townships 66 and 67, ranges 9 and 10. A number of small creeks flow south across the base line in sections 35 and 34. These join a short distance south of the line and swing around to the northeast again, crossing the line in section 31, and flowing to Heart lake, about six miles north of the line. Another small creek also flows north across the northern boundary of section 31. The soil in this township is good, consisting chiefly of black loam to a depth of from six to twelve inches on a subsoil of clay. No water-powers, coal, stone-quarries nor minerals of economic value were noted. Moose, elk and bears are plentiful. A few partridges and rabbits are also found.—*Wm. Christie, D.L.S., 1910.*

## RANGE 11.

The soil consists of a rich black loam averaging about four inches in depth, and a subsoil of clay or sandy clay. It is, except for a number of small muskegs, well suited to the growing of cereals common to Alberta. The township is timbered throughout, the timber consisting of alternate patches of spruce, tamarack and poplar averaging about six inches in diameter and second-growth poplar and willow scrub in the southwest quarter, and in the remainder of the township poplar, balm of Gilead, spruce and tamarack averaging about eight inches in diameter, and scattered birch averaging five inches. The only hay is found in a small meadow of about twenty acres in extent in the northwest quarter of section 17. Fresh water of good quality is available in a number of lakes of considerable size,

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 11.—*Continued.*

and also in a number of small creeks, the largest of which is about ten feet wide and two feet deep and flows out of lake Helena into the lake in sections 14 and 23 and thence into Ironwood lake. No water-powers exist, and, on account of the rolling nature of the country, extensive floods are impossible. The climate is similar to that of Edmonton. No stone-quarries nor minerals of economic value are found, but wood fuel is everywhere abundant. Ducks and partridges are plentiful.—*W. H. Waddell, D.L.S., 1910.*

**66.** The soil consists of a rich black loam from two to ten inches in depth on a clay subsoil, and, with the exception of a number of small muskegs, appears to be well suited to farming. The timber consists of spruce, poplar, balm of Gilead and tamarack averaging about nine inches in diameter, and a scattering of birch averaging about five inches in diameter. Wood fuel is found in abundance. No hay meadows are found, and while there is a rich growth of vegetation on the uplands it is impossible to cut it for hay owing to the heavy growth of timber. Pure and fresh water is supplied by a number of large lakes and by a creek about fifty feet wide and five feet deep flowing into Egg lake in section 24. Owing to the rolling nature of the country there is no danger of serious flooding. No water-powers are available. Climatic conditions are similar to those at Edmonton. No stone-quarries nor minerals of economic value are known. The game consists of ducks and partridges.—*W. H. Waddell, D.L.S., 1910.*

**68.** (*North outline*).—The surface of this township is rolling, the soil consisting chiefly of black loam to a depth of from four to twelve inches on a subsoil of clay. The northeast quarter of the township is heavily timbered with poplar and spruce, with the exception of a large muskeg which occupies part of sections 35 and 36. The northwest quarter of the township consists of large muskegs separated by ridges covered with brulé and small scrub, poplar and jackpine. The south half of the township is lightly wooded with scattered small poplar and willow. A wagon road leading from Lac la Biche to Heart lake crosses this township from south to north. This road was in good condition at the time of the survey (August). A lake about a mile and a half in length by about half a mile in width lies approximately in sections 16 and 21. No water-powers, stone-quarries, coal nor minerals of economic value were noted. No game, with the exception of a few partridges, prairie-chickens and rabbits, were seen, but indications of the presence of moose, bears, foxes and coyotes were noted.—*Wm. Christie, D.L.S., 1910.*

## RANGE 12.

**65.** The soil consists of a rich black loam averaging about four inches in depth on a clay or sandy clay subsoil, and with the exception of a number of small swamps and muskegs is well adapted to mixed farming. The timber consists principally of poplar, balm of Gilead, spruce and tamarack averaging about eight inches in diameter, and scattered birch averaging about four inches, but several parts, particularly those in the southwest quarter, have been burnt over and are now covered with second-growth poplar and willow. Wood fuel is very plentiful. Hay meadows of small extent occur in the southwest quarter but not elsewhere. Fresh water of good quality is found in a number of small lakes scattered throughout the township, and also in a part of Beaver lake and Elinor lake. There are no water-powers and on account of the rolling nature of the country there is little liability of floods. Climatic

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 12.—*Continued.*

conditions are similar to those of Edmonton. No stone-quarries nor minerals are found and the game consists of ducks and partridges. Splendid fish are caught in the larger lakes.—*W. H. Waddell, D.L.S., 1910.*

**66.** The soil is a good black loam on a sandy clay subsoil from one to twelve inches deep, and with the exception of a number of small swamps and muskegs which can, however, be easily drained, is well adapted to the raising of cereals common to the other parts of Alberta. The timber consists of spruce, poplar, birch and tamarack, averaging about seven inches in diameter, but a large part of the township has been burnt over and is now covered with second-growth poplar and willow. The easterly one-third contains more of the unburnt timber than the westerly parts, but patches of this timber are to be found on nearly every section. Hay is found in one meadow only. There is a good growth of pea-vine on the upland but this cannot be cut owing to the thick scrub. All the water is fresh and owing to the large number of lakes, including a portion of Beaver lake, the supply is permanent. Owing to the rolling nature of the country there is no serious danger of floods. No water-powers can be developed. General indications point to a climate similar to that at Edmonton. No stone-quarries nor minerals are known, but wood fuel is everywhere abundant. The game consists of ducks and partridges, and fish are plentiful in Beaver lake.—*W. H. Waddell, D.L.S., 1910.*

*(North outline).*—The surface of this township is rolling. In the northeast corner of the township are some large muskegs alternating with ridges covered with brûlé and small scrub poplar and jackpine. The rest of the township is timbered with poplar, birch and willow, with a small amount of spruce. The soil is chiefly black loam to a depth of from three to six inches on a subsoil of clay. A creek twenty feet wide and two feet deep flows northwest across the northeast corner of the township, crossing the base line in section 34. There is some good hay along its banks. Three small lakes lie in sections 31, 33 and 36 respectively. A portion of Square lake also lies in this township, in sections 19, 30 and 31. No water-powers, stone-quarries, coal nor minerals of economic value were noted. No game of any kind was seen in the township, but indications of the presence of moose, bears, foxes and coyotes were noted.—*Wm. Christie, D.L.S., 1910.*

## RANGE 13.

The soil in the eastern part is a rich black loam on a sandy clay subsoil, but toward the west the soil gradually changes to muskeg with sandy ridges, very little of the soil being good. When the land is cleared of bush the eastern half and small portions of the western half will be well suited to mixed farming. The surface is covered on the eastern part with spruce, birch, poplar, balsam of Gilead and tamarack, up to twenty-four inches in diameter, but on the western half scrub predominates, principally spruce, tamarack and jackpine. There is very little open hay land except in sections 17 and 18, where some splendid hay is grown, but water is of excellent quality and abundant, especially in Owl river. There are no stone-quarries, minerals, nor water-powers, but wood fuel is everywhere found. Moose and caribou are plentiful and the climate is good although, on account of the muskegs to the west there may be danger of some slight summer frosts.—*W. H. Waddell, D.L.S., 1910.*

## RANGE 15.

The surface is mostly muskeg with occasional ridges of jackpine and poplar.  
**69.** Hay is very plentiful along the shores of lac La Biche and LaBiche river; good fresh water is also found in them and in other streams. Moose and caribou are very plentiful.—*C. A. Chilver, D.L.S., 1910.*



## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

## RANGE 16.

The soil is a heavy clay and the country though badly broken by swamps is well suited to mixed farming. The surface in general is undulating and covered with poplar, spruce, jackpine and willow underbrush, a small portion of the spruce and jackpine being merchantable, but badly scattered. Fresh water of an unlimited supply is found in creeks and lakes but hay meadows and water-powers are not found. There are no stone-quarries, coal deposits, nor minerals but wood is found in abundance and moose, bears, deer, grouse and jackfish are sufficiently plentiful. The climate is similar to that of Edmonton.—*B. F. Mitchell, D.L.S., 1910.*

The soil is suitable for farming, being a black loam from four to eighteen inches deep, with a clay subsoil. The surface is mostly covered with scrub poplar and willow, and small patches of poplar and spruce up to eighteen inches in diameter in sections 14, 15, 22, 23, 24, 25, 26, 27, 34 and 35. Hay is plentiful nearly everywhere and water is found in muskegs in the northern part, in lakes and in creeks. There are no minerals nor stone-quarries but the climate is suitable for the raising of cereals. Game consists of moose, ducks and partridges. Whitefish and jackfish are also found.—*C. A. Chilver, D.L.S., 1910.*

This district is very difficult of access, on account of the muskegs which cover the greater part. It is covered principally with spruce and tamarack, and in sections 1, 12, 13, 24, 25, 26, 32, 33, 34, 35 and 36, with poplar up to eighteen inches in diameter. LaBiche river enters in section 25, and leaves in section 6, but there are no water-powers. Moose and caribou are plentiful.—*C. A. Chilver, D.L.S., 1910.*

## RANGE 17.

The soil is a stiff clay, with sand ridges and will take some time to develop into a good farm land, but it is admirably adapted to grazing. The surface of the eastern half is rolling, while the western portion is of a hilly nature, the whole being covered with poplar, spruce and jackpine up to twelve inches in diameter, and willow brush and thick vegetation. A small percentage of the spruce is suitable for milling, but it is scattered. Swamps are quite numerous but as they are caused by beavers, they may be easily drained. Fresh water is assured by the lakes, creeks and sloughs, but water-powers and hay meadows do not exist. Coal, stone-quarries, and minerals are unknown but wood fuel is plentiful, and moose, bears, deer, jackfish and whitefish are found. Summer frosts at present occur but they will disappear when the surface is cleared.—*B. F. Mitchell, D.L.S., 1910.*

The soil is mostly a stiff clay and some time will elapse before it can be developed into a good farming land, but it is admirably adapted for grazing. The surface is for the most part rolling and covered with poplar, spruce and jackpine up to ten inches in diameter, and with willow brush and thick vegetation. Swamps are numerous, but as they are the result of beaver work they may be easily drained. A permanent fresh water supply is to be obtained from the lakes, creeks and sloughs, but there are no water-powers nor hay meadows. Stone-quarries, coal deposits, or minerals do not occur, but wood fuel is abundant, and game consisting of moose, bears, deer and grouse is found. There is also a great supply of jackfish in the lakes. Summer frosts are at present in evidence, but these will disappear as the land is cleared.—*B. F. Mitchell, D.L.S., 1910.*

The soil is principally clay, and while sand is conspicuous in parts it is nevertheless a good mixed farming country. The surface, in general, is rolling and covered with poplar, spruce and jackpine up to twenty-four inches in diameter, a small portion of which has a commercial value. Two large creeks, flowing

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 17.—*Continued.*

in a northerly direction, and several lakes furnish a water supply, but no water-powers exist. Coal areas, stone-quarries, minerals and hay meadows are not found, but wood fuel is abundant. Moose, bears, deer and grouse are plentiful.—*B. F. Mitchell, D.L.S., 1910.*

**64.** The soil for the most part is clay, and although sand shows up prominently in places, it is nevertheless a good mixed farming district. The surface in the northwest portion is very hilly and adapted only for grazing; in sections 33, 34, 35, 28, 27 and 26 it is undulating and covered with willow and poplar scrub, while in the remainder it is rolling and covered with poplar, spruce and jackpine up to twenty inches in diameter. Some of the spruce and jackpine have a commercial value, but the quantity is small. A permanent supply of fresh water is assured by the creeks and lakes, but water-powers are lacking. There are no hay meadows, stone-quarries, coal deposits nor minerals, but sufficient wood-fuel may be easily obtained. Moose, bears, deer and grouse abound.—*B. F. Mitchell, D.L.S., 1910.*

**68.** The soil is a black loam, six to eighteen inches deep, with a clay subsoil, and the surface is covered with poplar and willow scrub, except in sections 17, 18, 20, 29 and part of sections 8, 9, 15, 21, 27, 28, 31 and 32, which are timbered with white poplar ten to eighteen inches in diameter. Hay is plentiful along LaBiche river and Charon lake, and good fresh water is found in them, but water in the interior is scarce. The climate is suitable for farming purposes. Game consisting of moose is plentiful.—*C. A. Chilver, D.L.S., 1910.*

The surface is mostly muskeg, except along LaBiche river in a block comprising part of sections 16, 17, 19, 20, 21, 22, 26, 27 and 35, and in another block comprising part of sections 12, 13 and 24, both of which blocks are timbered with white poplar six to eighteen inches in diameter. Very little hay is found, but fresh water is available in the muskegs, in LaBiche river, and in several other streams. Summer frosts occur early in August. Moose and caribou are very plentiful.—*C. A. Chilver, D.L.S., 1910.*

## RANGE 18.

The surface is heavily rolling, and is rough and hilly, being divided diagonally northwest and southeast by the valley of White-earth river; this valley is one and one-half miles wide, with hills one hundred and fifty feet high at its beginning in section 19. The soil is mostly third class. Northeast of the valley yellow clay is found. Spruce, tamarack and poplar averaging eight inches in diameter are found. There are no water-powers and floods are likely only in the vicinity of White-earth river. Fresh water and wood for fuel are plentiful, but coal is not known, and game is scarce.—*J. B. McFarlane, D.L.S., 1910.*

**62.** The surface in the southern part is heavily rolling, but in the northern part is somewhat moderated. The south and southeast parts are somewhat broken by valleys. No timber of any value is known, the hills and slopes as a rule being covered with poplar, scattered spruce and jackpine. The soil, third class, consists of an impervious clay with a shallow surface soil of black loam. Water-powers do not exist, nor do floods occur. Wood for fuel is plentiful and fresh water is everywhere found. No stone-quarries or minerals are known.—*L. R. Ord, D.L.S., 1910.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 18.—*Continued.*

The surface is rolling and covered as a rule on the slopes with poplar, spruce, 63. jackpine and birch, the poplar at times running to twelve inches and the spruce and jackpine to fifteen inches in diameter. The soil is a shallow black loam on top of a subsoil of impervious clay, the whole rated as third class. Hay meadows are found around the several lakes that dot the township. As the water in these lakes is shallow, there are no water-powers and there is no danger of floods. Wood fuel, and fresh water are plentiful, but coal, stone-quarries and minerals are not known.—*L. R. Ord, D.L.S., 1910.*

The surface is heavily rolling and broken up by two deep valleys, eight to 64. one hundred and fifty feet deep running nearly southwest and northeast, in one of which lies Beaver creek and the southerly end of Beaver lake. The surface is wooded, although the forests are somewhat fire killed, the best timber being found in sections 7, 18, 19, 30, 10, 11, 14 and 15. In the southeast the soil is mostly a stiff clay, and in the remainder are very many shallow swamps and muskegs. No stone-quarries, nor minerals are known, but good water and wood for fuel are plentiful.—*L. R. Ord, D.L.S., 1910.*

The surface is wooded, but good timber is scarce, spruce and poplar about 65. fifteen inches in diameter being found in a large tract in sections 29, 30, 31, 32, 33 and in another in sections 17, 18, 19, 20 and 21. The soil, mostly third class, consists mostly of a stiff clay with but little loam, although some sandy areas occur towards the east. The surface is rolling and hilly toward the centre, with lakes in the deeper valleys. Fresh water is plentiful, but there are no water-powers, and there is no danger of floods. The climate is fairly good, there being no summer frosts as far as is known. There are no stone-quarries nor minerals.—*L. R. Ord, D.L.S., 1910.*

The soil in the centre is a black loam, twelve to eighteen inches deep, but the 67. northerly and southeasterly parts are mostly muskeg. The best parts of sections 14, 15, 22, 23, 19, 30, 21, 28 and 32, are timbered with poplar from six to fifteen inches in diameter, and the remainder of the township is covered with small poplar or spruce. A creek crossing the northwest corner and another creek flowing northerly through the eastern tier of sections furnish an abundant supply of water, and along their banks there is a sufficient supply of hay. No stone-quarries nor minerals are found, but the climate is well suited to grain growing, no summer frosts occurring. Moose and caribou are plentiful.—*C. A. Chilver, D.L.S., 1910.*

The surface in the centre and northeasterly part is one large spruce and 68. tamarack muskeg; in sections 1, 31 and 32, it is muskeg, and in the remainder it is poplar and willow scrub. Except spruce and tamarack in sections 2 and 3 there is no timber of any commercial value. There are a few small creeks which furnish fresh water, but there are no water-powers. The soil is in the muskegs, peat with a clay subsoil, and on the higher land near the creeks is a sandy loam, with a sand or sandy clay subsoil, the latter suitable for farming. The climate is moist and free from summer frosts. No coal, minerals nor stone-quarries of economic value are known, but wood for fuel is abundant. Moose, partridges and chickens are found.—*J. Waldron, D.L.S., 1910.*

Athabaska river, fourteen chains wide and flowing three miles per hour 69. through sections 18, 17, 20, 29, 30 and 31, furnishes the best means of access to the township. The surface is generally level, broken only by the valley of the Athabaska, and by the valley of the LaBiche flowing through sections 31, 32, 33

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 18.—*Continued.*

and 34, both valleys being about one mile wide and one hundred to two hundred feet deep. The level portion is covered with poplar ridges, running north and south, with intervening muskegs. The timber consists of poplar and birch about eight inches in diameter and spruce a little larger, found principally on the river-slopes. Water is fresh and furnished in sufficient quantities by Athabaska and LaBiche rivers, and by a creek, but there are no water-powers. In the elevated portions the soil consists of a sandy loam with a sandy or sometimes gravelly subsoil, and in the muskegs of peat several inches deep, with a clay subsoil. No coal nor quarries exist. Moose, bears and partridges are seen.—*J. Waldron, D.L.S., 1910.*

## RANGE 19.

The soil is a black loam five to six inches deep, with a clay subsoil, and is  
**2.** suitable for mixed farming. The surface consists of rolling and undulating prairie broken by coulees 50 to 100 feet deep along the river valley, the whole without timber or fuel of any sort. Hay of good quality is found on the uplands, and of an inferior quality on the lowlands. Good water can probably be obtained from wells as the soil is apparently free from alkali, but there is also a permanent supply of fresh water in Milk river, which is sixty to seventy feet wide and two feet deep at low water, flowing irregularly from west to east. The volume of this river is great and liable to flood the land in its vicinity, but this would be a benefit. Water-power can be developed by damming this river, and its flow might also be diverted for purposes of irrigation. Summer frosts are liable in August, but the season is of sufficient length to permit the maturing of crops. No stone-quarries nor minerals are known and there is no game but antelope, rabbits and grouse.—*W. F. O'Hara, D.L.S., 1910.*

This township was reached by pack-trail from township 61, range 20; a  
**61.** wagon trail from the south runs across the eastern part of the township, but in the summer it is apparently impracticable. The eastern part is rolling, with deep creek ravines, but the soil is good for farming when the timber is cleared, while to the west muskegs and poplar ridges are found. Good poplar and spruce, suitable for fuel and buildings for settlers' purposes, grow in the township, and in the northeast corner along the south bank of White-earth river there is spruce and tamarack up to thirty inches. Numerous small hay sloughs are found, and a number of lakes, which are large enough to be traversed, are fed by numerous small creeks. White-earth river flows southerly across the northeast corner of the township, and is, when leaving the township, thirty feet wide and three feet deep with banks four feet high. The climate is similar to that of Edmonton, and no coal, stone-quarries nor minerals were located.—*H. L. Seymour, D.L.S., 1910.*

This township was reached by pack-trail from township 62, range 20. Another  
**62.** old pack-trail and a wagon trail enter this township in section 1, running north to a lake locally known as 'Long' lake. The surface is rolling and broken to the east and north by creek ravines, while the west half of the township is fairly open and could be cleared for agricultural purposes, the soil being a sandy clay with some loam in places. Part of the east half could also be used for farming. Good hay is found along the creek valleys. A great part of this township has been fire swept, but plenty of timber can be found for the use of settlers, and to the east of 'Long' lake, a considerable quantity of spruce up to thirty inches is to be found. The surface here is very rough and hilly, however, which would render lumbering rather difficult. In some parts of the township spruce is to be found, but in no place in large enough quantities to make lumbering practicable. Several lakes, large enough

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 19.—*Continued.*

to be traversed, were found, and also a number of small creeks containing excellent water. The climate is similar to that of Edmonton. Deer, bears, moose and elk were seen in considerable numbers and in 'Long' lake fish abound. No stone-quarries, coal, nor minerals of any kind were found.—*H. L. Seymour, D.L.S., 1910.*

This township was reached by a pack-trail which enters at the southwest corner of section 2, coming north from township 62. A sleigh trail also enters the township on the south boundary of section 5, and runs north through the township. This road might, with some work, be made suitable for wagons. Pack-trails were also found running north along lake No. 1. The east half of this township is very hilly on account of the banks of lake No. 1, locally known as 'Long' lake, which occupies practically the east half of the township; these banks rise to a height of two hundred to three hundred feet. The creeks in this township run in an easterly direction into lake No. 1, and on nearing the lake have many deep ravines, making the country around the lake very hilly, and hardly suited for farming purposes. The surface of the west half of the township is rolling, being composed of ridges of poplar and spruce, interspersed with spruce and tamarack muskegs. This part of the township might be made suitable for farming with some clearing, as the soil for the most part is good, being composed of a fair amount of loam with a sandy clay subsoil. Settlers would have no difficulty in obtaining timber for fuel and building, as any quantity of poplar and spruce to eighteen inches in diameter can be found, as well as spruce and tamarack to twelve inches in the muskegs. Considerable drainage would be necessary in some parts to make farming practicable. The township has been considerably swept by fire, nevertheless good hay can be found in the sloughs, and along the shores of lake No. 1. Good feed for stock can be found in practically all parts. Practically the only timber which could be used for lumbering is found around lake No. 1, where spruce to thirty-six inches in diameter is to be found in considerable quantities. There is plenty of timber of a size large enough for lumbering scattered through the township but not in sufficient quantities to make lumbering practicable. A few lakes large enough to be traversed were found. The climate is similar to that of Edmonton. There are no stone-quarries, coal nor minerals of any kind in the township. Deer, moose, bears and elk are to be found in considerable numbers.—*H. L. Seymour, D.L.S., 1910.*

The surface is covered with a series of poplar strips, slightly elevated, running chiefly north and south, with intervening muskegs. Sections 1, 2, 11, 12 and part of 14 are covered with poplar averaging eight inches in diameter, and spruce averaging six inches. The soil in the muskegs is peat with clay loam, while on the high lands it is black loam, with sandy clay subsoil, the latter capable of being used for agriculture. Hay of the blue-point variety grows in abundance but is inaccessible on account of brush. None of the marshes produce hay. There are no water-powers but fresh water is found in streams, in muskegs and in a lake in section 30. The climate is moist and moderate. No coal, stone-quarries, nor minerals are known. The game consists of moose and bears.—*J. Waldron, D.L.S., 1910.*

The surface of this township, reached by Athabaska river from Athabaska Landing, is gently rolling. Sections 26 and 35, and the west half of sections 25 and 36, are chiefly *brulé* muskeg; in the northern half are many open marshes. The soil is a sandy loam with sand subsoil. The whole is well wooded, the river valley by poplar, spruce and birch averaging eight inches in diameter, the portion south of the river by jackpine averaging six inches in diameter, and the north by jackpine ridges, mostly scrub with intervening stretches of poplar and willow. There

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 19.—*Continued.*

are no water-powers, but fresh water is found in streams, muskegs and Athabaska river. No hay is found. There are no stone-quarries, coal deposits, nor minerals. Deer and moose are found.—*J. Waldron, D.L.S., 1910.*

## RANGE 20.

This township may be reached by either of two good routes, one from  
**2.** Milk River, and the other from Raymond. The soil consists of five or six inches of black loam on a clay subsoil and makes very good mixed farming land, while the surface is rolling and undulating prairie, entirely destitute of timber, with a number of coulees fifty to one hundred feet deep along Milk river. Small quantities of hay grow on the low lands and good water can be obtained from wells as the land is free from alkali. Milk river, a stream sixty feet wide and two feet deep, flows from west to east across the township. The volume of water is large and could be used for irrigation, but no lands are liable to be flooded. There are no falls nor rapids, but power could be developed by the construction of dams. Frost occurs in August, but the season generally will allow crops to mature. There is no fuel, stone-quarries nor minerals in the township. A few antelope, rabbits and grouse may be found, but game is scarce.—*W. F. O'Hara, D.L.S., 1910.*

This township can be reached by taking the Victoria trail from Edmonton  
**61.** to the mouth of Sucker creek in township 58, thence by a fairly passable wagon trail along Sucker creek to section 27, township 60, range 21. From this point a sleigh trail leads into this township, which was used last winter by the Alberta and Great Waterways railway, but it is almost impassable in summer, and packhorses are then necessary. The township is almost flat, being composed of spruce muskegs and poplar islands or ridges. Good soil and farming land is found along Waskatenau creek and its tributaries, and a wagon trail might be made along this creek from Pine Creek post-office on Saskatchewan river. There is plenty of timber for settlers' needs (for building and fuel), consisting of poplar, spruce and jack-pine, but it is mostly small and of no value for lumbering. Numerous small hay sloughs are found. Waskatenau creek, fed by two small tributaries, leaves the township in the southeast corner; it is from eight to ten feet wide and one foot deep, the water being of excellent quality. Other small streams are found in the muskegs. The climate is similar to that of Edmonton. No coal, stone-quarries nor minerals were located. Moose, deer and bears are found.—*H. L. Seymour, D.L.S., 1910.*

This township can be reached from township 61 by sleigh trail, but only by  
**62.** packhorses in summer, unless considerable work were put on a wagon road. The surface is flat, being composed of spruce muskegs with some poplar ridges. There is some farming land along Waskatenau creek and in the southeast corner of the township, but the greater part would require extensive drainage to render it fit for agricultural purposes. Along Waskatenau creek good hay can be found. There is plenty of timber for settlers' needs, but it is mostly small and of no value for lumbering. Waskatenau creek rises in the muskegs of the northeast corner of the township and leaves in section 3, where it is about six feet wide and one foot deep, but there is no possibility of developing water-power from it. The climate is similar to that of Edmonton. No coal, stone-quarries nor minerals were located. Moose, bears and deer are found.—*H. L. Seymour, D.L.S., 1910.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 20.—*Continued.*

For the most part the surface is rolling and covered with spruce and tamarack muskegs and swamps, interspersed with ridges of poplar and jackpine.

**63.** A great deal of draining would be necessary to render this district suitable for agriculture, although in the ridges good soil is found which, with some clearing, would be suitable for farming. Good hay is found around lakes and numerous streams, and in muskegs and swamps. Settlers would find timber sufficient for building material and for fuel, but except in the southeast and southwest corners, where spruce up to thirty inches is found, none is of any commercial value. A few lakes large enough to be traversed are found in the southern part. Stone-quarries, minerals or coal deposits are not found, but game is plentiful and the climate is fine and warm, without summer frosts.—*H. L. Seymour, D.L.S., 1910.*

With the exception of the northwest corner which is broken by the Athabaska river the surface is level, or very gently rolling. The slopes to the river are thickly wooded with poplar, spruce and birch averaging about eight inches in diameter, while the remainder has been partially fire killed, which fire-killed areas are covered with poplar and willow on the high lands, and scrub, tamarack and spruce on the low lands or muskegs. There is a series of ridges, chiefly poplar, running at right angles to the river with intervening muskegs. The ridges are light soil, while the muskegs are covered with peat from a few inches to two feet deep with underneath a clay subsoil. There is no alkali in the water and water-powers do not exist. No stone-quarries nor minerals are known. The game consists of moose, bears and partridges.—*J. Waldron, D.L.S., 1910.*

This township is reached by boat from Athabaska Landing on the Athabaska river, which is fourteen chains wide, runs four miles per hour, and is twenty feet deep in the main channel; it flows in a regular course from section 5 to section 13. On the muskegs the soil is peat, with a sandy clay subsoil; on the higher ground it is a sandy loam, with a sand or sandy clay subsoil. Hay does not grow. Water, fresh and plentiful, is found in muskegs, in streams and in the Athabaska river. The surface, except for the river valley about two hundred feet deep and three-quarters of a mile wide, is gently rolling, and is well wooded, particularly along the river bank, although in the northern part are many muskegs. The timber in the river valley consists of poplar, birch and spruce averaging about eight inches in diameter, and jackpine six inches in diameter, while in the northern part there is spruce and tamarack about four inches in diameter. There are no stone-quarries or minerals. Moose, bears and partridges are found.—*J. Waldron, D.L.S., 1910.*

## RANGE 21.

The route from the city of Edmonton to this township was by the Athabaska Landing trail as far north as the centre of township 61, range 24, where a trail runs easterly to Edmonton's ranch. This far travelling was good. East of Edmonton's ranch an old lumber mill road leads as far as the east boundary of township 61, range 23, and from this line we cut our own trails. The soil is clay in some parts mixed with sand, but a large portion of the township is covered with moss from twelve to eighteen inches in depth with a clay subsoil. The surface is level and covered with spruce, tamarack and poplar, a small quantity of birch, jackpine and balsam. Willow bush grows thickly. Spruce in small quantities grows in the northwest quarter of section 36 from four to twenty-four inches in diameter; also in the northwest quarter of section 35 spruce ten to twenty-four inches and poplar eight to

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 21.—*Continued.*

twenty inches in diameter are found. Hay grows along the valley of Namepi or Sucker creek. The water is fresh and the supply permanent, but not sufficient, since Namepi creek is the only permanent supply in the township. The land is not liable to be flooded and there are no water-powers. Summer frosts occur. Wood is the most readily available fuel and is found in all parts of the township. There are no stone-quarries nor minerals. Game consists of moose, deer, black and cinnamon bears, rabbits, partridges and muskrats.—*T. A. Davies, D.L.S., 1910.*

The route followed from Edmonton to this township was by the Athabaska  
**62.** Landing trail as far north as the centre of township 61, range 24, where a trail runs easterly to Edmonton's ranch. This far travelling was good. East of Edmonton's ranch an old lumber mill road leads as far as the east outline of township 61, range 23, and from this line our own trails lead to this township. The soil is clay in some parts mixed with sand, but a large portion of the township is covered with moss from twelve to eighteen inches in depth with a clay subsoil. The surface is level and covered with spruce, tamarack and poplar from two to twenty inches in diameter also scattered birch from two to ten inches in diameter and willow bush. The largest timber in the township is situated in sections 1; 2, 3 and 4, spruce and tamarack from eight to twenty inches, and poplar and birch from six to ten inches in diameter. The water is fresh and the supply comes from the small lakes and Namepi creek. In the valley of this creek hay grows in considerable quantities. The land is not liable to be flooded and there are no water-powers. Summer frosts occur. There are no stone-quarries and no indication of minerals. Game consists of moose, deer, cinnamon and black bears, partridges, ducks and muskrats.—*T. A. Davies, D.L.S., 1910.*

The route followed from Edmonton to the township was by the Athabaska  
**63.** Landing trail as far north as the centre of township 61, range 24, where a trail runs easterly to Edmonton's ranch. This far travelling was good. East of Edmonton's ranch an old lumber mill road leads as far as the east outline of township 61, range 23 and from this line our own trails lead to this township. The soil is clay in some parts mixed with sand. A large portion of the township is covered with moss from twelve to eighteen inches in depth with a clay subsoil. The surface is level and covered with spruce, tamarack and poplar from two to six inches in diameter, scattered birch and willow bush. The water is fresh and the supply comes from the small lakes except in the northwest corner of the township through which part a creek flows. In the valley of this creek hay grows in small patches. The land is not liable to be flooded and there are no water-powers. Summer frosts occur. Wood is readily available for fuel in all parts of the township. There are no stone-quarries nor minerals. Game consists of moose, deer, cinnamon, and black bears, partridges, ducks and muskrats.—*T. A. Davies, D.L.S., 1910.*

The soil consists chiefly of rich clay with a few inches of black loam, and,  
**68.** as climatic conditions are favourable, it is well suited for raising cereals, and for mixed farming. The surface is slightly rolling except where broken by the valley of the Athabaska, and is covered with poplar and spruce with patches of jackpine back from the valley on the south side, and with spruce of commercial value in the river valley in sections 16, 15, 14 and 24. Hay meadows and water-powers are not known but there is an abundance of fresh water. There are no stone-quarries nor minerals of economic value, but game is plentiful and wood fuel is obtainable in every quarter section.—*J. L. Cote, D.L.S., 1910.*



## TOWNSHIPS WEST OF THE FOURTH MERIDIAN:

RANGE 21.—*Continued.*

The subsoil is a rich yellow clay, with a few inches of black loam and is well adapted to farming, climatic conditions also being favourable. Parts of the township are covered with spruce swamps or muskegs, but the most of it is high and dry and easily cleared. The surface is slightly rolling and covered with spruce and second-growth poplar, with a small quantity of good marketable spruce in the southwest corner. Hay meadows and water-powers are not known, but plenty of fresh water is available. Minerals and stone-quarries are not found, but wood fuel may be had in every quarter section, and game is found in large quantities.—*J. L. Cole, D.L.S., 1910.*

## RANGE 22.

The route followed from Edmonton to this township was the Athabaska  
**61.** Landing trail as far north as the centre of township 61, range 24 where a trail runs easterly to Edmonton's ranch. This far travelling was good. East of Edmonton's ranch an old lumber mill road leads as far as the east outline of township 61, range 23 and from this line we cut our own trails. The soil is clay, in some parts mixed with sand. A large portion of the township is covered with moss from twelve to eighteen inches in depth with a clay subsoil. The surface is level and covered with spruce, tamarack, jackpine, poplar, birch, balsam and willow bush. In the east half of section 33 and the west half of 34 there is a small quantity of spruce from eight to twenty inches in diameter, poplar eight to fourteen inches and birch four to eight inches. In the east half of sections 4 and 9 and the west half of sections 3 and 10 there is a small quantity of spruce from four to fourteen inches and poplar four to ten inches in diameter. No hay grows. The water is fresh but not permanent and the supply comes from the moss swamps and muskegs. The land is not liable to be flooded and there are no water-powers. Summer frosts occur. Wood is readily available for fuel in all parts of the township. No stone-quarries nor minerals are found. Game consists of moose, deer, black and cinnamon bears, rabbits, partridges and muskrats.—*T. A. Davies, D.L.S., 1910.*

The route followed from Edmonton to this township was the Athabaska  
**62.** Landing trail as far north as the centre of township 61, where a trail runs easterly into Edmonton's ranch. This far travelling was good. East of Edmonton's ranch an old lumber mill road, in bad condition, leads as far as the east outline of township 61, range 23, and from this line we cut our own trails. The soil is clay, in some parts mixed with sand. A large portion is covered with moss from twelve to eighteen inches in depth with a clay subsoil. The surface is level and timbered throughout with spruce, tamarack, poplar, a small quantity of birch, jackpine and balsam, with willow brush in abundance. The spruce, tamarack and poplar run up to twenty inches in diameter. In the northwest quarter of section 19 and the southwest quarter of section 30, there is spruce from four to twenty-four inches in diameter, poplar from two to twelve inches and birch from two to six inches in diameter, in quantity sufficient for lumbering. No hay grows. The water is not alkaline and that used for camping purposes was obtained mostly from the moss swamps. Small lakes in sections 15, 22, 27, 33, 34 and 35 contain fresh water but may not be permanent. The land is not liable to be flooded and there are no water-powers. Summer frosts occur. Wood is the most readily available fuel and can be obtained in all parts. No stone-quarries nor minerals were found. Game consists of moose, deer, black and cinnamon bears, partridges, rabbits and muskrats.—*T. A. Davies, D.L.S., 1909.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

## RANGE 22.—Continued.

The route followed from Edmonton to this township was the Athabaska Landing trail as far north as the centre of township 61, range 24 where a trail runs easterly into Edmonton's ranch. This far travelling was good. East of Edmonton's ranch an old lumber mill road, in bad condition, leads as far as the east outline of township 61, range 23 and from this line we cut our own trails. The soil is clay in some parts mixed with sand but a large portion is covered with moss from twelve to eighteen inches in depth with a clay subsoil. The surface is undulating and covered with spruce, tamarack and poplar from two to ten inches in diameter, a small quantity of birch from two to six inches, balsam two to ten inches, and jackpine from four to eight inches in diameter. Willow brush grows in abundance and hay grows in the valley of Pine creek. The water is fresh and the supply permanent. The land is not liable to be flooded and there are no water-powers. Summer frosts occur. Wood is the most readily available fuel and can be obtained in all parts of the township. There are no stone-quarries nor minerals. Game consists of moose, deer, black and cinnamon bears, rabbits, muskrats, ducks and partridges.—*T. A. Davies, D.L.S., 1910.*

**68.** The south and eastern parts contain first-class soil well adapted to mixed farming, and climatic conditions are favourable, summer frosts not being known. The surface is level, except where broken in the southeast corner by the Athabaska river, and covered with spruce and poplar, and with young poplar and willow brush in the sections recently burned, none of which however, is of any economic value. Abundance of hay for domestic use is available, but no meadows of any size exist. There are no water-powers, but fresh water is found in muskegs and in several small creeks. Stone-quarries and minerals are not known, but wood fuel is everywhere abundant, and game is plentiful. Ready access to this district may be had by wagon road, or by the Athabaska river from Athabaska Landing.—*J. L. Cole, D.L.S., 1910.*

The soil is composed chiefly of yellow clay, and is suitable for mixed farming, although the eastern part is chiefly muskeg and would have to be drained. **69.** The surface is all slightly rolling and timbered with spruce and poplar, that of the most value being found in sections 8, 9, 16, and 17, but it is hard to get out. Hay is found only in small patches in the southwest corner, but there is plenty of fresh water. Stone-quarries, minerals and water-powers are not found, but the climate is good, with no summer frosts, and wood fuel and game are sufficient.—*J. L. Cole, D.L.S., 1910.*

## RANGE 23.

The soil is chiefly a yellow clay suitable for mixed farming or grazing purposes, and climatic conditions are favourable, no summer frosts being known. **68.** The surface is fairly level back from the river, and, apart from one hundred acres covered with spruce at the junction of Athabaska river and the base line, is covered with poplar, willow and spruce bush. Hay is lacking except on sections 19 and 30, but there is an abundance of good fresh water. There are no minerals, nor water-powers, but small game is abundant, and wood fuel is sufficient everywhere.—*J. L. Cole, D.L.S., 1910.*

A good wagon trail furnishes access from Athabaska Landing. The soil consists of a yellow clay and is well suited for grazing purposes. **69.** The surface is rolling, but broken by the river valley and by large creeks, and is covered with spruce and poplar bush none of any commercial value. No water-powers are known,

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 23.—*Continued.*

and very little hay is found, but fresh water is available. There are no stone-quarries nor minerals, but the climate is good, no summer frosts occurring. Game is quite plentiful.—*J. L. Cote, D.L.S., 1910.*

## RANGE 25

The soil varies from a sandy clay to a heavy clay subsoil with from one to  
**64.** six inches of loam, and is a good farm land; but summer frosts are liable to limit the range of the crops. The surface, apart from a range of hills extending diagonally from the northeast corner to the southwest, is rolling and covered with small poplar, birch, willow, jackpine and spruce, none of any commercial value. Grass grows sparsely almost everywhere in the high ground, and there are hay sloughs in the northerly part, but they are mostly inaccessible. Several small streams, muskegs and nine lakes furnish an abundant supply of fresh water. Minerals and stone-quarries are lacking, but game and wood fuel are plentiful.—*I. J. Steele, D.L.S., 1910.*

The soil varies from a sandy clay to a heavy clay subsoil, with from one to  
**65.** six inches of loam. Most garden vegetables could be grown on such a soil, but climatic conditions would limit the range of crops more than the character of the soil. The surface is rolling and entirely covered with timber or scrub, the timber of commercial size however being of too limited extent to be of value, although a few clumps of poplar, birch and spruce in sections 7, 8, 17, 18, 19 and 30 are of good size. Water, fresh and permanent, is available in creeks and lakes, but hay cannot be cut on account of rough ground and willow. The climate is temperate, but frosts are likely to occur at any time. Stone-quarries, water-powers and minerals are not found, but wood fuel is sufficient, and game is very plentiful.—*I. J. Steele, D.L.S., 1910.*

The soil varies from a sandy clay to a heavy clay subsoil, with from one to  
**66.** six inches of loam, and is an excellent farming land, but the range of crops cultivated is liable to be curtailed by summer frosts. The surface is rolling, but inclined to be hilly in places, and covered on the low ground with small spruce and tamarack, and on the high ground with poplar, willow and alder, none of any commercial value. Grass grows sparsely almost everywhere on the high ground, and there are hay marshes around some of the lakes but little is available although in section 24 is a meadow of thirty acres. Water-powers are not found but water is sufficient and fresh in two small creeks, muskegs in sections 1, 2 and 3, and in fourteen lakes. Stone quarries and minerals are not known, but wood fuel and game are plentiful.—*I. J. Steele, D.L.S., 1910.*

The soil varies from a sandy clay to a heavy clay subsoil, with from one  
**67.** to six inches of loam, and is good farm land, but climatic conditions limit the range of the crops. The surface is gently rolling and covered in the east third with birch, poplar, spruce, jackpine and tamarack, with considerable brûlé in places, and in the western two-thirds with jackpine and spruce, none in either part, however, being of commercial value. Grass grows sparsely on the high ground, and there is hay around the margin of some of the lakes, but rough ground and willow render it difficult of access. There are no streams of any size and consequently no water-powers, but there are in all ten lakes ranging in size from twenty to over a thousand acres, and these furnish a sufficient supply of fresh water. Muskegs are numerous in the northern part and along the middle meridian. Stone-quarries and minerals are not known, and summer frosts are liable to occur, but wood fuel and game are plentiful.—*I. J. Steele, D.L.S., 1910*

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TOWNSHIP WEST OF THE FOURTH MERIDIAN.

RANGE 25.—*Continued.*

The soil varies from a sandy clay to a heavy clay subsoil, with from one to six inches of loam, and is an excellent farm land, but the range of crops is likely to be somewhat restricted by the climate. The surface, except for a few small hills in sections 22 and 23, is rolling and it is covered in the easterly third with comparatively large timber ranging up to twelve and fifteen inches in diameter, birch and poplar predominating, and in the western two-thirds, which has been recently burned over, with small jackpine and spruce, with tamarack in the muskegs. Grass grows sparsely on the high ground and there are a few beaver meadows along the creeks, but no hay could be cut on account of marsh and willow. There are no water-powers, but water is available in streams, in a few small lakes, and in muskegs which cover nearly all of sections 17, 19, 20, 29 and 30. No stone-quarries, minerals, nor coal deposits are known and frosts occur during every month, but wood fuel everywhere is sufficient and game is of good quantity.—*I. J. Steele, D.L.S., 1910.*

RANGE 26.

The soil varies from a sandy clay to a heavy clay subsoil, with from one to six inches of loam and is an excellent farm land, but the range of crops is likely to be limited by the character of the climate. Apart from a well-defined valley running through sections 13, 23, 26 and 35 the surface is rolling and covered with small poplar, birch, willow, spruce and jackpine, but none of any commercial value. Grass grows sparsely on all the high ground, and there are also a few scattered hay sloughs, but no hay could be cut. A fair supply of water is available in streams, lakes, sloughs and muskegs, but there are no water-powers. Wood fuel and game are plentiful, but no stone-quarries, nor minerals. Frosts are liable to occur at any time.—*I. J. Steele, D.L.S., 1910.*

The best route to this township is by a fairly good wagon road from  
**65.** Athabaska Landing which comes to the northeast corner. The surface of the township is fairly level though broken by many muskegs, except in the southern tier of sections, where it is inclined to be rolling. It is generally wooded quite heavily except in parts of sections 16, 21, 22, 27 and 28, which are scrubby and easily cleared. The timber is not large except for scattered clumps of poplar and is of no commercial value. The soil is of a fair quality for agricultural purposes except along numerous ridges where it is light and sandy. There is an abundant water supply produced by two lakes and by two large and many small creeks. These creeks are not of a character to produce water-power. There is a fair supply of hay in small areas, but there are no large meadows. Plenty of wood for fuel is available, but no coal nor any minerals were seen. Game is very scarce.—*R. H. Knight, D.L.S., 1910.*

This township can be reached by a fair wagon road, from Athabaska  
**66.** Landing coming to the southeast corner. There is little inducement to offer the settler, as a very large area of the township is muskeg cut by sandy ridges. The only sections suitable for farming purposes are 1 and 12 and parts of sections 2, 11 and 14. The land throughout is wooded, consisting of spruce and tamarack in the muskegs, and thick small poplar and jackpine on the higher ground. There is, however, a block of timber on section 21 and the west half of 20 comprising about one square mile. This timber consists of large poplar, spruce and birch up to twenty-four inches in diameter, but in my opinion not sufficient quantity to warrant its being reserved for a timber berth. There is plenty of good water consisting of five lakes and many small creeks which, however, have not

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 26.—*Continued.*

sufficient flow nor volume to be of service for power purposes. Very little hay is found as there are no meadows nor sloughs of any size. No coal nor any mineral was found. A few moose and bears were seen during the survey operations.—*R. H. Knight, D.L.S., 1910.*

The nearest village to this township is Athabaska Landing from which place  
**67.** a fairly good wagon trail can be followed as far as township 68 range 25.

At the present time this township does not appear to be of much use for farming or ranching purposes, too much of it being muskeg. The surface is rolling and wooded throughout. The south part of the township outside of the muskeg is covered with much standing timber and second-growth poplar and willow, while along the west side and in the northeast corner there is a very heavy growth of poplar and some spruce, though not enough to be of commercial value. The soil on the higher ground is fair consisting of about five inches of black loam with a clay subsoil. The township is well watered throughout; besides the bogs and numerous muskegs there are five lakes and many creeks. The creeks are too small to develop any power. There is a little hay, growing only at the edge of the lakes. No stone was found, nor was any coal nor minerals. Some moose and a few bears were seen during the survey operations.—*R. H. Knight, D.L.S., 1910.*

There is at present no direct means of connection by trail with Athabaska

**68.** Landing, the nearest town. The nearest wagon road runs into the easterly side of township 68, range 25. The township is rather heavily wooded and contains several large muskegs, but on the whole is fairly adapted to agricultural purposes. It is fairly level and the soil consists of from six to eight inches of black loam with a clay subsoil. The bush is of poplar and spruce up to ten inches in diameter, the latter however not in sufficient quantity to be of value commercially. There is plenty of good water in three lakes and numerous creeks. The creeks are not large enough to develop water-power. There is very little hay, but plenty of wood. No coal nor minerals of economic value were found. A number of moose were seen, but no other game was noticed.—*R. H. Knight, D.L.S., 1910.*

## RANGE 27.

The soil consists of a black loam, six to twelve inches deep, with a clay  
**1.** subsoil, and is adapted for mixed farming, particularly the raising of vegetables. The surface is very hilly, varying from 4,000 to 5,000 feet above sea level, and is covered with timber and small scrub, the timber consisting of jackpine and spruce, found in small clumps in the western half. The fuel consists entirely of wood, no coal having yet been discovered. Timothy hay of good quality is found in the flats, in the valley of Lee creek. An inexhaustible supply of fresh spring water is found in nearly every quarter section on streams. Lee creek, the largest, seventy-five feet wide, two feet deep at low water, and with a current of three miles per hour, contains no falls nor rapids, but water-power could be developed by damming. No stone-quarries nor minerals are found and the game consists of deer, rabbits, beaver and grouse. This township is in the foot-hills of the Rocky mountains, and marks the limit of agricultural land in southwestern Alberta.—*W. F. O'Hara, D.L.S., 1910.*

This is a fractional township being only two and one-half miles in width.  
**68.** It is rather difficult of access at present, the nearest road being to the southwest in township 61, range 1, west of the fifth meridian, but when a road is opened the township should fill up rapidly with settlers. The soil is good, averag-

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

## RANGE 27.—Continued.

ing about six inches of black loam with a clay subsoil, suitable for agricultural purposes. The surface is nearly level, and being but lightly wooded is easily cleared. There is no timber of commercial value except that located in timber berth No. 1296. Fairly good hay is found scattered about the township in small areas. Pembina river and several creeks flow through this township, but the river has not sufficient current to develop water-power. There is no stone, coal, nor any mineral of economic value found. Game is scarce.—*R. H. Knight, D.L.S., 1910.*

This township can be reached only by a pack-trail which connects with a  
**64.** wagon trail at the northeast corner of township 65, range 26. The wagon trail connects with Athabaska Landing. This township is fractional, being but two miles in width. It is quite suited for agricultural purposes, the soil being composed of six inches of black loam, with a clay subsoil. The surface is nearly level, and although wooded, is easy to clear, for this section of country has been recently burned over. There are good building logs, and there is plenty of wood but no timber of commercial value, except that located in timber berth No. 1296, in the extreme south of the township. There is plenty of hay, though not in any large areas. This township is watered by several creeks of very good water, though none of them are large enough to develop water-power. No stone suitable for building, no coal, nor mineral has been found in this district. Game is scarce, consisting of a few black and brown bears.—*R. H. Knight, D.L.S., 1910.*

This township is reached by a fair wagon trail from Athabaska Landing as  
**65.** far as the northeast corner of township 65, range 26, and thence by pack trail. It is a fractional township being about two and one-half miles wide. There is not much likelihood of its being settled upon to any great extent for some time as it consists mostly of muskegs and sandy ridges, covered with jackpine, and contains very few quarter sections suitable for agricultural purposes. The water supply is abundant. There is one large lake besides several smaller ones, and a large creek about three feet deep with a good flow of fresh water, which runs down the east side and across the south side of the township. The flow is not sufficient for water-power, however. The only hay meadow of any size is along this creek in section 12. Across section 36 and extending into section 35 is a belt of heavy timber, spruce and poplar up to twenty inches. The spruce is not of sufficient quantity to be of commercial value. The remainder is wooded with tamarack and spruce, mostly small in the muskegs, and with poplar and jackpine on the ridges though most of the trees have been killed by a recent fire. There is no stone suitable for building purposes, nor is any coal, or other mineral to be seen. Game is very scarce.—*R. H. Knight, D.L.S., 1910.*

This is a fractional township which can be reached by a wagon road as far  
**66.** as the northeast corner of township 65, range 26, via Athabaska Landing. It does not promise very speedy settlement, as the country is not well adapted for agricultural pursuits. It is badly cut up by muskegs, and where the ground is higher the soil is light, and the top soil has been badly burned off. The township is wooded with small spruce and tamarack on the low lands or muskegs, and poplar and jackpine on the higher ground, which were nearly all killed by the recent fires. There is no timber in sufficient quantity to be of any commercial value. Two small creeks provide a good supply of fresh water and along them the only hay in the township is to be found. These creeks are not large enough to be of any use in developing power. There is a very plentiful supply of wood for fuel, but no coal nor mineral so far as we could judge. A few moose and bears were the only game.—*R. H. Knight, D.L.S., 1910.*

## TOWNSHIPS WEST OF THE FOURTH MERIDIAN.

RANGE 27.—*Continued.*

The nearest wagon trail to this township is in the easterly part of township 67, range 25, and connects with the village of Athabaska Landing. This is a very small fractional township, being less than a mile and a quarter wide. It is level and heavily wooded with poplar up to eighteen inches in diameter, and with large scattered spruce trees which, however, are not in sufficient quantity to be of commercial value. The soil is fair, averaging about six inches of black loam, with a clay subsoil. The cost of clearing would be so great that it is likely to be some time before the township is settled. Another drawback is the scarcity of water. With the exception of a lake in the northeast corner and a muskeg on the south boundary, the only water is a small creek running through sections 23 and 24. There is no hay available. There is an abundance of wood, but no coal nor any other mineral is to be seen. At the time of the survey, in the month of October, moose were very plentiful, but no other game could be found.—*R. H. Knight, D.L.S., 1910.*

The nearest trail to this township is a trail from Athabaska Landing into township 68, range 25. This is a fractional township about one and one-quarter miles in width. It is nearly level and the soil is of fair quality for farming purposes, but is so heavily wooded that it can be cleared only at great expense. The timber consists of poplar and spruce of a size up to twenty inches in diameter, with an underbrush of willow. The water supply is very limited, there being only two very small creeks, one in section 25 and the other in sections 11 and 12. No coal nor other minerals were seen. Moose were plentiful in the district but no other game was in evidence.—*R. H. Knight, D.L.S., 1910.*

## RANGE 30.

This district is accessible by good wagon roads from Pincher. The soil is a black loam, but owing to summer frosts and hills it is suitable only for grazing purposes. The entire township lies in the Porcupine hills, the tops of which are heavily timbered with fir of fair quality from one to three feet in diameter, the remainder being covered with small poplar and willow. The southerly and easterly slopes are frequently open grassy hills, and the valleys of the creeks are open to some extent. There are no hay lands but there is a sufficient and permanent supply of fresh spring water in numerous small, rapid creeks, although there is no available water-power. No stone-quarries nor minerals of economic value are known. Game consisting of grouse and deer is found.—*W. A. Scott, D.L.S., 1910*